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AMENDMENT

S/N 09/460,107, FILED 12/13/99

APR 01 2002

PATENT  
130-129

GROUP 1600

25. (amended) An apparatus, as defined in Claim 13, wherein: separate heat exchanger compartments can be clamped to a lower surface of [said] a thermoplastic web containing said patterns of reagent wells to form a liquid tight seal around individual said patterns of reagent wells.

Please insert the following new Claims 29-32.

29. An apparatus for performing a reagent protocol using polymerase chain reaction, comprising:

(a) means to index patterns of reagent wells on a continuous basis through at least one step of reagent addition to said reagent wells;

A3 (b) means to index said patterns of reagent wells on a continuous basis through a plurality of individual heat transfer stations, whereby at each of said individual heat transfer stations, said patterns of reagent wells are subjected to a unique temperature change to cause one amplification step, with said plurality of individual heat transfer stations providing total amplification required for said protocol; and

(c) means to seal said reagent wells following said at least one step of reagent addition to said wells, wherein said patterns of reagent wells are sealed to provide a liquid tight but peelable seal as provided by pressure sensitive adhesive or heat seal methods.

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30. An apparatus for performing a reagent protocol using polymerase chain reaction, comprising:

(a) means to index patterns of reagent wells on a continuous basis through at least one step of reagent addition to said reagent wells;

(b) means to index said patterns of reagent wells on a continuous basis through a plurality of individual heat transfer stations, whereby at each of said individual heat transfer stations, said patterns of reagent wells are subjected to a unique temperature change to cause one amplification step, with said plurality of individual heat transfer stations providing total amplification required for said protocol;

(c) means to seal said reagent wells following said at least one step of reagent addition to said wells; and

(d) separate heat exchanger compartments can be clamped to a lower surface of a thermoplastic web containing said patterns of reagent wells to form a liquid tight seal around individual said patterns of reagent wells.

31. An apparatus, as defined in Claim 30, further comprising: means to cause heat exchange fluid to flow through each of said separate heat exchanger compartments for specific time controlled periods.

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32. An apparatus for performing a reagent protocol using polymerase chain reaction, comprising:

(a) means to index patterns of reagent wells on a continuous basis through at least one step of reagent addition to said reagent wells;

(b) means to index said patterns of reagent wells on a continuous basis through a plurality of individual heat transfer stations, whereby at each of said individual heat transfer stations, said patterns of reagent wells are subjected to a unique temperature change to cause one amplification step, with said plurality of individual heat transfer stations providing total amplification required for said protocol;

(c) means to seal said reagent wells following said at least one step of reagent addition to said wells; and

(d) means to peel sealing material from a top of said thermoplastic web to provide access to said reagents by a single or multiple well pipettor, said means to peel including a heated pressure roller in contact with said sealing material to apply a line of heat across said thermoplastic web to soften bonding of said sealing material to said thermoplastic web to permit ease of removal by applying tension to said sealing material.